IN THE CLAIMS:

Please cancel claims 28-30, without prejudice. This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS

1-13. (Canceled)

14. (Currently Amended) A method for screening compounds for biological activity ~~and/~~or toxicity comprising adding a compound to an apparatus which comprises:

a nanoporous silicon support comprising a plurality of nanopores,

a plurality of macrowells disposed on the nanoporous silicon support, and

at least one cell within one of said plurality of macrowells,

contacting the at least one cell within one of said plurality of marcrowells with a compound; and

monitoring the at least one cell for a change in biological activity or toxicity;

wherein the at least one cell is in contact with the nanoporous silicon support and is provided with nutrients and oxygen sufficient to maintain the viability of the at least one cell and the nanopores do not allow the at least one cell to pass through the nanoporous silicon support, ~~and the at least one cell is monitored for changes in response to addition of the compound~~ wherein a change in biological activity or toxicity is indicative of a compound that has an effect on the biological activity of the cell or has a toxic effect on the cell.

15. (Previously presented) The method of claim 14, wherein the plurality of macrowells have a diameter between 0.2 and 200 microns.

16. (Previously presented) The method of claim 14, wherein the plurality of macrowells have a diameter between 0.2 and 150 microns.

17. (Previously presented) The method of claim 14, wherein the plurality of macrowells have a diameter between 15 and 25 microns.

18. (Currently Amended) The method of claim 14, wherein the at least one cell is a ~~cells are~~ eukaryotic cell[[s]].

19. (Currently Amended) The method of claim 14, wherein the at least one cell is a ~~cells are~~ hepatic cell[[s]].

20. (Currently Amended) The method of claim 14, wherein the at least one cell is a ~~cells are~~ prokaryotic cell[[s]].

21. (Previously presented) The method of claim 14, wherein the plurality of macrowells are coated with a coating substance selected from the group consisting of biomolecules, peptides and proteins that promote cell adhesion on biocompatable polymers.

22. (Original) The method of claim 21, wherein the coating substance is selected from the group consisting of collagen, fibronectin, vitronectin, RGD and YIGSR peptides, GAGs, HA, integrins, selectins and cadherins.

23. (Previously presented) The method of claim 14, wherein the plurality of macrowells are prepared using a method selected from the group consisting of micromolding, electrodeposition machining, laser ablation, laser drilling, micromachining, wet etching, reactive ion etching, LIGA and embossing.

24. (Previously presented) The method of claim 14, wherein the at least one cell is perfused with culture medium or buffered saline solution.

25. (Currently Amended) The ~~apparatus~~ method of claim ~~14~~ 24, wherein the direction of perfusion is in any orientation relative to the support.

26. (Original) A method of claim 14, wherein multiple compounds are screened simultaneously for interactions.

27. (Currently Amended) A method for screening a compound for at least one activity under physiological conditions ~~in a microarray~~ comprising

exposing at least one cell to a compound in an apparatus which comprises a nanoporous silicon support and a plurality of macrowells disposed thereon, the at least one cell within one of said plurality of macrowells,

wherein the nanoporous silicon support allows the at least one cell to obtain nutrients and oxygen sufficient to maintain the viability of the at least one cell ~~exposed to a compound to be tested~~ and

measuring a change in at least one activity of the cell, wherein a change is indicative of a compound that has an effect on the at least one cell ~~screened for at least one effect of the compound on the at least one cell~~.

28-30. (Canceled)